Attorney Docket No. 10059US10

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

Charles Edwin Thorn
Frank Polakovic
Charles A. Mosolf

Serial No. 10/728,423

Filed: December 5, 2003

For: PRINTED WIRING BOARDS AND METHODS FOR MAKING THEM

Examiner: Not assigned

Group Art Unit: 1741

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

March 5, 2004

Priscilla F. Gallagher

Priscilla F. Gallagher
Reg. No. 32,223

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT AFTER APPLICATION FILING DATE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

ENCLOSURES

Enclosed are the following:

* A completed form PTO/SB/08A which has twelve (12) pages. The references listed in the enclosed form PTO/SB/08A not previously provided to or by the PTO in this application.

* A copy of each printed or patented foreign reference listed in the enclosed form PTO/SB/08A and not previously provided to or by the PTO in this application. One hundred twenty-six (126) references are enclosed.

FEE DETERMINATION

* No fee is believed to be due because:

The applicant(s) believe(s) that this statement and enclosures are being filed before the first Office action on the merits has been mailed by the PTO. The basis of this belief is that no Office action on the merits appears to have been received by the undersigned to date.

FEE PAYMENT

The following arrangements have been made to pay the fees calculated above:

* No fee is believed to be due.

The Commissioner is hereby authorized to charge any additional fees which are presently required, or credit any overpayment, to Deposit Account No. 13-0017.

REQUEST FOR CONSIDERATION

This paper and enclosures are believed to be entitled to consideration under 37 C.F.R. § 1.97, based on the facts stated above. The Examiner is requested to initial both copies of the enclosed PTO-1449 (modified) and return one copy to the applicants to indicate consideration of the enclosed references.

Respectfully submitted,

Dated: March 5, 2004

Priscilla F. Gallagher
Reg. No. 32,223
Attorney for applicants

McAndrews, Held & Malloy, Ltd.
34th Floor
500 West Madison Street
Chicago, IL 60661
(312) 775-8000

Form PTO-1449 (Rev. 8-83)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 10059US10	SERIAL NO. 10/728,423
		APPLICANT(s): Thorn et al.	
		FILING DATE December 5, 2003	GROUP ART UNIT: 1741

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	409,096	08/18/1889	Blank			
	A2	1,037,469	09/03/12	Goldberg			
	A3	2,176,879	10/24/39	Bartell	44	9	
	A4	2,243,429	05/27/41	Laux	204	30	
	A5	2,692,857	10/26/54	Michel et al	252	28	
	A6	2,833,736	05/06/58	Glaser	260	29.6	
	A7	2,872,391	02/03/59	Hauser et al.	204	15	
	A8	2,897,409	07/28/59	Gitto	317	101	
	A9	2,926,116	02/23/60	Keim	162	164	
	A10	2,926,154	02/23/60	Keim	260	29.2	
	A11	2,978,428	04/04/61	Aberegg	260	29.6	
	A12	2,983,220	05/09/61	Dalton et al.	101	149.2	
	A13	3,049,469	08/14/62	Davison	162	164	
	A14	3,058,873	10/16/62	Keim	162	164	
	A15	3,099,608	07/30/63	Radovsky et al.	204	15	
	A16	3,152,996	10/13/64	Forrester	252	313	
	A17	3,163,588	12/29/64	Shortt et al.	204	16	
	A18	3,224,986	12/21/65	Butler et al.	260	9	
	A19	3,249,559	05/03/66	Gallas	252	510	
	A20	3,332,834	07/25/67	Reynolds, Jr.	162	164	
	A21	3,495,962	02/17/70	Norton	65	26	
	A22	3,506,482	04/14/70	Hirohata et al.	117	212	
	A23	3,509,088	04/28/70	Dalton	260	41	
	A24	3,515,201	06/02/70	Zimmerman	164	66	
	A25	3,518,116	06/30/70	Stock et al.	117	226	
	A26	3,565,658	02/23/71	Frazier et al.	106	307	
	A27	3,578,577	05/11/71	Gilchrist	204	181	
	A28	3,592,731	07/13/71	Griggs	162	164	
	A29	3,639,121	02/01/72	York	96	1.5	
	A30	3,655,530	04/11/72	Taylor	204	26	

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A31	3,658,873	04/25/72	Sirrenberg et al.	260	456	
	A32	3,696,054	10/03/72	Saunders	252	511	
	A33	3,697,450	10/10/72	Takenaka et al.	252	511	
	A34	3,725,214	04/03/73	Bride	204	15	
	A35	3,763,060	10/02/73	Hamerstrand et al.	260	9	
	A36	3,764,280	10/09/73	Lupinski	29	195	
	A37	3,818,412	06/18/74	Deardurff	338	214	
	A38	3,852,131	12/03/74	Houston	156	3	
	A39	3,865,626	02/11/75	Diener et al.	117	226	
	A40	3,865,699	02/11/75	Luch	204	20	
	A41	3,870,987	03/11/75	Wiley et al.	338	214	
	A42	3,874,862	04/01/75	Bickling, Jr. et al.	65	26	
	A43	3,881,048	04/29/75	Bertrand	428	447	
	A44	3,917,894	11/04/75	Coleman	428	414	
	A45	3,962,159	06/08/76	Ray-Chaudhuri et al.	260	17.4	
	A46	3,963,498	06/15/76	Trevoy	96	87 A	
	A47	3,966,581	06/29/76	Holte	204	202	
	A48	3,983,042	09/28/76	Jain et al.	252	18	
	A49	3,991,397	11/09/76	King	338	214	
	A50	4,000,046	12/28/76	Weaver	204	38R	
	A51	4,035,265	07/12/77	Saunders	252	510	
	A52	4,037,017	07/19/77	Maslanka	428	413	
	A53	4,090,984	05/23/78	Lin et al.	252	511	
	A54	4,104,178	08/01/78	Jain et al.	252	30	
	A55	4,105,513	08/08/78	Nishino et al.	204	38A	
	A56	4,152,199	05/01/79	Hamerstrand et al.	162	164	
	A57	4,187,334	02/05/80	LaBate	427	236	
	A58	4,205,974	06/03/80	Franz	65	40	
	A59	4,213,870	07/22/80	Loran	252	51.5 R	
	A60	4,239,794	12/16/80	Allard	428	219	

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A61	4,239,818	12/16/80	LaBate	427	236	
	A62	4,254,180	03/03/81	Kline	428	323	
	A63	4,278,511	07/14/81	Dugan	204	15	
	A64	4,316,831	02/23/82	LaBate	260	29.6 S	
	A65	4,321,295	03/23/82	Smith-Johannsen	428	206	
	A66	4,368,252	01/11/83	Kakuhashi et al.	430	312	
	A67	4,389,278	06/21/83	Kai	156	630	
	A68	4,401,579	08/30/83	Kratzer	252	17	
	A69	4,416,790	11/22/83	Schürmann et al.	252	62	
	A70	4,424,930	01/10/84	Wilhelmson	228	20	
	A71	4,425,380	01/10/84	Nuzzi et al.	427	97	
	A72	4,430,166	02/07/84	Carter	204	15	
	A73	4,442,139	04/10/84	Brigham	427	122	
	A74	4,462,922	07/31/84	Boskamp	252	174.12	
	A75	4,465,565	08/14/84	Zanio	204	56 R	
	A76	4,478,368	10/23/84	Yie	239	430	
	A77	4,529,683	07/16/85	Bishop	430	215	
	A78	4,547,311	10/15/85	Sako et al.	252	511	
	A79	4,571,286	02/18/86	Penato	204	15	
	A80	4,581,301	04/08/86	Michaelson	428	551	
	A81	4,617,579	10/14/86	Sachdev et al	346	135.1	
	A82	4,619,741	10/28/86	Minten et al.	204	15	
	A83	4,619,871	10/28/86	Takami	428	607	
	A84	4,622,107	11/11/86	Piano	204	15	
	A85	4,622,108	11/11/86	Polakovic et al.	204	15	
	A86	4,629,537	12/16/86	Hsu	204	15	
	A87	4,631,117	12/23/86	Minten et al.	204	15	
	A88	4,634,619	01/06/87	Lindsay	427	97	
	A89	4,683,036	07/28/87	Morrissey et al.	204	15	
	A90	4,684,560	08/04/87	Minten et al.	428	131	

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	A91	4,691,091	09/01/87	Lyons et al.	219	121 LM	
	A92	4,718,993	01/12/88	Cupta et al.	204	15	
	A93	4,724,005	02/09/88	Minten et al.	106	307	
	A94	4,735,676	04/05/88	Iwasa	156	630	
	A95	4,735,734	04/05/88	Staub et al.	252	29	
	A96	4,758,358	07/19/88	Lum et al.	252	22	
	A97	4,786,198	11/22/88	Zgambo	106	20 xr	
	A98	4,790,902	12/13/88	Wada et al.	156	630	
	A99	4,808,324	02/28/89	Periard et al.	252	23	
	A100	4,818,437	04/04/89	Wiley	252	511	
	A101	4,818,438	04/04/89	Wiley	252	511	
	A102	4,820,344	04/11/89	Geke et al	106	14.13	
	A103	4,867,792	09/19/89	Ronlan	106	189	
	A104	4,874,477	10/17/89	Philip Pendleton			
	A105	4,879,015	11/07/89	Adamek et al.	204	224R	
	A106	4,889,750	12/26/89	Wiley	428	342	
	A107	4,897,164	01/30/90	Piano et al.	204	15	
	A108	4,911,796	03/27/90	Reed	204	15	
	A109	4,921,777	05/01/90	Fraenkel et al.	430	314	
	A110	4,935,109	06/19/90	Dugan	204	15	
	A111	4,964,948	10/23/90	Reed	156	659.1	
	A112	4,964,959	10/23/90	Nelson et al.	204	15	
	A113	4,969,979	11/13/90	Appelt et al.	204	15	
	A114	4,980,202	12/25/90	Brennan et al.	427	249	
	A115	4,994,153	02/19/91	Piano et al.	204	15	
	A116	5,015,339	05/14/91	Pendleton	204	15	
	A117	5,018,979	05/28/91	Gilano et al.	434	409	
	A118	5,024,735	06/18/91	Kadija	204	15	
	A119	5,030,367	07/09/91	Tanaka et al.	252	22	
	A120	5,032,235	07/16/91	Downing et al.	204	15	

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A121	5,041,242	08/20/91	Fowle et al.	252	511	
	A122	5,057,245	10/15/91	Frentzel et al.	252	511	
	A123	5,106,537	04/21/92	Nelsen et al.	252	502	
	A124	5,108,553	04/28/92	Foster et al.	205	125	
	A125	5,110,355	05/05/92	Penleton	106	1.11	
	A126	5,139,642	08/18/92	Randolph et al.	205	125	
	A127	5,160,375	11/03/92	Otaki	252	506xr	
	A128	5,234,627	08/10/93	Damschroder	252	502	
	A129	5,262,041	11/16/93	Gulla	205	125	
	A130	5,277,787	01/11/94	Otani et al.	205	125	
	A131	5,389,270	02/14/95	Thorn et al.	252	22	
	A132	5,391,421	02/21/95	Gulla	428	209	
	A133	5,468,597	11/21/95	Calabrese et al.	430	315	
	A134	5,476,580	12/19/95	Thron et al.	205	122	
	A135	5,484,518	01/16/96	Goldberg	205	166	
	A136	5,494,610	02/27/96	Lovell	252	511	
	A137	5,498,372	03/12/96	Hedges	252	511	
	A138	5,500,106	03/19/96	Goldberg	205	166	
	A139	5,536,386	07/16/96	Ferrier et al.	205	125	
	A140	5,547,558	08/20/96	Sakamoto et al.	205	125	
	A141	5,549,849	08/27/96	Namura et al.	252	503	
	A142	5,622,652	04/22/97	Kucherovsky et al.	252	511	
	A143	5,690,805	11/25/97	Thorn et al.	205	118	
	A144	5,725,807	03/10/98	Thorn et al.	252	510	
	A145	5,738,776	04/1998	Florio et al.	205	118	
	A146	5,858,198	01/1999	Florio et al.	205	183	

FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NO.	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

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FOREIGN PATENT DOCUMENTS								
	B1	2,102,240	10/23/92	Canada				
	B2	182408	03/15/80	Czechoslovakia				x
	B3	0 752 807 A1	01/08/97	EP				
	B4	0 759 482 A1	02/26/97	EP				
	B5	0 381 761 A1	08/16/90	EP				
	B6	0 085 413 A2	08/10/83	EP				
	B7	60-110893	11/17/83	Japan				
	B8	WO 92/19092	10/29/92	PCT				
	B9	1,136,977	12/18/68	United Kingdom				
	B10	1,176,597	01/07/70	United Kingdom				
	B11	1,506,464	04/05/78	United Kingdom				
	B12	2,177,707 A	01/28/87	United Kingdom				
	B13	674981	07/25/79	USSR			Abstract Only	
	B14	745964	07/21/80	USSR			Abstract Only	
	B15	943333	07/15/82	USSR			Abstract Only	
	B16	768793	11/10/80	USSR			Abstract Only	
	B17	571435	09/05/77	USSR			Abstract Only	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	C1	Acheson – Product Data Sheet "Dag 137 Graphite Lubricating Coating," Acheson Colloids Company, Port Huron, Michigan 48060, 2 pages.
	C2	Acheson – Product Data Sheet "Electrodag® 230 Conductive Impregnant," Acheson Colloids Company, Port Huron, Michigan 48060, 2 pages
	C3	Acheson – "Electrodag® Coatings Selection Guide," Acheson Colloids Company, P.O. Box 611747, Port Huron, Michigan 48061-1747
	C4	Acheson – Product Data Sheet "Aquadag,"
	C5	Aqualon, CMC AQUALON Cellulose Gum Sodium Carboxymethycellulose, Physical and Chemical Properties, 5 pages
	C6	Aqualon, KLUCEL Hydroxypropylcellulose, Physical and Chemical Properties, 28 pages
	C7	Aqualon, NATROSOL Hydroxyethylcellulose A Nonionic Water-Soluble Polymer Physical and Chemical Properties, Aqualon pp. 1-5

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	C8	Aqualon,Technical Information "Freezer Gel Preparation With Aqualon™ CMC," Bulletin VC-521 (Supersedes VC-405D), Aqualon Company,1313 North Market Street, Wilmington, Delaware 19894, 2 pages
	C9	Aquaness Chemical Technical Information, "ARKLEAR 155" 1 page
	C10	Aquaness Chemical Technical Information, "ARKLEAR 1055" 1 page
	C11	Asakawa, *et al.*, "Adsorption of Phenol on Surface-modified Carbon Black from its Aqueous Solution. II. Influence of Surface-Chemical Structure of Carbon on Adsorption of Phenol," *Bull. Chem. Soc. Jpn. 58*:2009-2014 (1985)
	C12	Bernhardt, "Preparation of Suspensions for Particle Size Analysis Methodical Recommendations, Liquids and Dispersing Agents," *Advances in Colloid and Interface Science, 29:*79-139 (1988)
	C13	Bose, *et al.*, "Preparation, Voltammetric Characterization, and Use of a Composite Containing Chemically Synthesized Polypyrrole and a Carrier Polymer," *J. Electrochem, Soc., 139(9):*L75-L76 (September 1992)
	C14	Brédas, "Electronic Structure of Highly Conducting Polymers," Facultés Universitaires Notre-Dame de la Paix, Namur, Belgium, 25:859-912
	C15	Chaurasia, *et al.*, "Thermal Conductivity of Supension and Emulsion Materials," *J. Appl. Chem. Biotechnol., 25(12):* 881-890 (1975)
	C16	Comello, "R&D Semiconductor Research, Conducting Polymers Finding Niche Uses," *R&D* Magazine, pp. 63-64 (July 1993)
	C17	Dagani, "Organic Metals: New polymers are most metallic yet," News of the Week, C&EN, pp. 8-9 (August 31, 1992)
	C18	Daxad, High Activity Dispersants, Technical Data CP-2, Organic Chemicals Division, W.R. Grace & Co., Lexington, Mass. 02173, 1 page
	C19	Dean, Lange's Handbook of Chemistry, McGraw-Hill, Inc., 14th ed., pp. 8.103-8.107 (Month of publication is unknown.)
	C20	Dow Chemical Company, METHOCEL Cellulose Ethers, Binders and processing aids for ceramics, 4 pages.
	C21	Dow Chemical Co., Selecting the Best VERSENE Chelating Agent, (undated)
	C22	Dovgyalo, *et al.*, "Electric mass transfer of dispersed conducting carbon black-polyethylene compositions during electrostatic fluidized-bed deposition," *Inzh.-Fiz. Zh. 57(4):*639-44 (1989) Abstract No. C A112(16):141269 (Abstract Only)
	C23	Encyclopedia of Science and Engineering, Cellular Materials to Composites, John Wiley & Sons, Vol. 3, pp. 235-243. (Month not known.)

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	C24	Exxon Chemical, Callaway 6818, 2 pages (May 30, 1991)
	C25	FLUORAD™ Technical Information - Fluorochemical Surfactants FC-120, 3M Industrial Chemical Products Division, (3/92)
	C26	Gottesfeld, *et al.*, "The Application of a Polypyrrole Precoat for the Metallization of Printed Circuit Boards," *J. Electrochem. Soc., 139(1):*L14-L16 (January 1992)
	C27	Grafo Bulletin, Dispersions of Graphite and Other Solids for Industrial Coating Applications, Grafo Coatings for the Electronic Industry (undated)
	C28	Grafo Bulletin, Dispersions of Graphite and Other Solids for Industrial Coating Applications, Products for Electronics (undated)
	C29	Groszek *et al.*, "Heats of Adsorption of Gold Chloride and Cyanide Complexes from Aqueous Solutions on Graphitized Carbon Black and a Coconut Active Carbon," *Carbon, 29(7):*821-829 (1991)
	C30	Hercules, Chemical and Physical Properties of Hercules Ethylcellulsoe, A Specialty Polymer With Broad Stability and Compatibility. Undated.
	C31	Hercules, Product Data, "Kymene® 736 Wet-Strength Resin and Retention Aid," Number 7576-1, (Supersedes 7576) Hercules Incorporated, Hercules Plaza, 1313 North Market Street, Wilmington, DE 19894-0001
	C32	Hercules, HERCULES, NITROCELLULOSE, The First Thermoplastic Polymer Made From a Renewable Resource, Chemical and Physical Properties, Undated
	C33	Hercules Technical Information, "Polycup® Resins Crosslinking Agents for Latices and Water-Soluble Polymers," Bulletin NP-102A (Supersedes NP-102) pp. 1-4 Hercules Incorporated Hercules Plaza, Wilmington, DE 19894-0001
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